



S/N 09/954,616

PATENT

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7/24/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: WOOLFORD ET AL. Examiner: F. LAGMAN  
Serial No.: 09/954,616 Group Art Unit: 3673  
Filed: SEPTEMBER 17, 2001 Docket No.: 3616.20USC6  
Title: COMPOSITE MASONRY BLOCK

CERTIFICATE UNDER 37 CFR 1.10:

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I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Commissioner for Patents, Washington, D.C. 20231.

By: 

Name: John Junkers

AMENDMENT AND RESPONSE

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In response to the office action mailed January 11, 2002, Applicants provide the following amendments and remarks.

In the Drawings

Applicants propose amending the drawings as shown in red on the enclosed Proposed Drawing Correction.

In the Specification

The paragraph beginning at page 1, line 1 has been replaced with the following rewritten paragraph:

-- This application is a Continuation of application Serial No. 09/665,231, filed September 18, 2000, now issued as U.S. Patent 6,312,197, which is a Continuation of application Serial No. 09/497,250, filed February 3, 2000, now issued as U.S. Patent No. 6,183,168, which is

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B1  
a Continuation of application Serial No. 09/160,916, filed September 25, 1998, now issued as U.S. Patent No. 6,142,713, which is a Continuation of application Serial No. 08/921,481, filed September 2, 1997, now issued as U.S. Patent No. 5,827,015, which is a Continuation of application Serial No. 08/675,572, filed July 3, 1996 (now abandoned), which is a Continuation of application Serial No. 08/469,795, filed June 6, 1995, now issued as U.S. Patent No. 5,589,124, which is a Continuation of application Serial No. 08/157,830, filed November 24, 1993 (now abandoned), which is a Divisional of application Serial No. 07/651,322, filed February 6, 1991, now issued as U.S. Patent No. 5,294,216, which is a Divisional of application Serial No. 07/534,831, filed June 7, 1990, now issued as U.S. Patent No. 5,062,610, which is a Continuation-in-Part application of Serial No. 07/413,400, filed September 27, 1989 (now abandoned), which is a Continuation-in-Part application of Serial No. 07/413,050, filed September 27, 1989 (now abandoned), which applications are incorporated herein by reference.

The paragraph beginning at page 13, line 22 has been replaced with the following rewritten paragraph:

B2  
-- As can be seen in Fig. 8, a supporting matrix 43 may be used to anchor the blocks in the earth fill 48' behind the wall. One advantage of the block of the present invention is that despite the absence of pins, the distortion created by the block flange 40 anchors the entire width of the matrix 43 when pressed between two adjacent blocks of different courses, as can be seen in Fig. 9.--

The paragraph beginning at page 13, line 29 has been replaced with the following rewritten paragraph:

B3  
-- In this instance, a wall is constructed again by forming a trench in the earth. The first course 49 of the wall is seated in the trench and will be under the soil once the wall is backfilled. The blocks 15 are placed on a securing mat or matrix 43 which is secured within the bank 48' by deadheads 44. The deadheads 44 serve as an additional stabilizing factor for the wall providing additional strength. The deadheads 44 may be staggered at given intervals over the length of each course and from course to course to provide an overall stability to the entire wall structure.-

The abstract on page 28 has been replaced with the new abstract enclosed herewith on a separate sheet.

**In the Claims**

Please cancel claims 17-22 without prejudice or disclaimer.

Please add new claims 30-83 as follows.

<sup>1</sup>~~30~~. (New) A mortarless retaining wall block comprising:

a generally planar upper surface which is substantially free of cores and recesses;  
a lower surface configured to engage the upper surface of an adjacent block of like construction to maintain a generally horizontal, parallel relationship between the upper surfaces of blocks in successive courses of blocks when the blocks are stacked together to form a wall;  
a front face;  
a rear face;  
a pair of side faces joining the front and rear faces and having rearwardly converging portions; and

B<sup>4</sup>  
a flange extending below the lower surface of the block to provide a surface suitable for engaging the rear face of a block of like construction in the course below said block to thereby provide a pre-determined set-back to a retaining wall constructed from such blocks;

wherein the block is free from cores extending through the block from side face to side face.

<sup>2</sup>~~31~~. (New) The block of claim <sup>1</sup>~~30~~ wherein a portion of each of said side faces converges towards the other side face as the side faces extend toward said rear face.

<sup>3</sup>~~32~~. (New) The block of claim <sup>1</sup>~~30~~ wherein said side faces have notches that extend from said upper surface to said lower surface.

<sup>4</sup>  
~~33~~. (New) The block of claim ~~30~~<sup>1</sup> wherein the front face of the block is generally vertical.

<sup>5</sup>  
~~34~~. (New) The block of claim ~~33~~<sup>4</sup> wherein the front face of the block is generally planar.

<sup>6</sup>  
~~35~~. (New) The block of claim ~~33~~<sup>4</sup> wherein the front face is non-planar.

<sup>7</sup>  
~~36~~. (New) The block of claim ~~35~~<sup>6</sup> wherein the front face of the block is faceted.

<sup>8</sup>  
~~37~~. (New) The block of claim ~~36~~<sup>7</sup> wherein the front face comprises three facets.

<sup>9</sup>  
~~38~~. (New) The block of claim ~~30~~<sup>1</sup> wherein a line drawn on the upper surface through the points where the rearwardly converging portions begin is substantially parallel to a line drawn through the points where the side faces join the rear face.

<sup>10</sup>  
~~39~~. (New) The block of claim ~~30~~<sup>1</sup> wherein the rear face is generally vertical.

<sup>11</sup>  
~~40~~. (New) The block of claim ~~30~~<sup>1</sup> wherein the depth of the block is the distance between the midpoint of the front face and the midpoint of the rear face, wherein the flange has a rear face which is substantially an extension of the rear face of the block, said flange further including a front locking surface which intersects the lower surface of the block, wherein the depth of the flange is the distance between the front locking surface and the rear face of the flange, and wherein the ratio of the depth of the block to the depth of the flange is at least about 6:1.

<sup>12</sup>  
~~41~~. (New) The block of claim ~~40~~<sup>11</sup> wherein the rear face of the block includes a substantially planar portion which is parallel to a line drawn through the points where the side faces join the rear face of the block.

28

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<sup>13</sup>  
~~42~~. (New) The block of claim ~~41~~<sup>12</sup> wherein the front locking surface of the flange intersects the top surface, and the line where the front locking surface intersects the top surface is generally parallel to the rear face of the block.

<sup>14</sup>  
~~43~~. (New) The block of claim ~~40~~<sup>11</sup> wherein each side face further includes a forwardly converging portion that intersects the front face at an angle of less than 90 degrees.

<sup>15</sup>  
~~44~~. (New) The block of claim ~~41~~<sup>12</sup> wherein the rearwardly converging side face portions each intersect the rear face at an angle of less than 90 degrees.

<sup>16</sup>  
~~45~~. (New) The block of claim ~~30~~<sup>1</sup> wherein each of said side faces comprises a first part and a second part, said side face first parts extending from said block front face towards said block rear face and intersecting the front face at an angle of ninety degrees or less, said side face second parts joining their respective side face first parts and said block rear face, each side face second part intersecting the rear face at an angle of less than ninety degrees.

<sup>17</sup>  
~~46~~. (New) The block of claim ~~45~~<sup>16</sup> wherein each of said first parts of said side faces is substantially perpendicular to the front face.

<sup>18</sup>  
~~47~~. (New) The block of claim ~~30~~<sup>1</sup> wherein the front face has a roughened texture.

<sup>19</sup>  
~~48~~. (New) The block of claim ~~30~~<sup>1</sup> wherein the lower surface has a smaller area for block to block contact than the area of the upper surface.

<sup>20</sup>  
~~49~~. (New) The block of claim ~~30~~<sup>1</sup> wherein said upper surface is completely free of cores and recesses.

<sup>21</sup>  
~~50~~. (New) A mortarless retaining wall block comprising:

a) a block body that,

- i) in top plan view presents a top surface that is substantially free of cores and recesses, and that has a front edge, an opposed rear edge, and opposed first and second side edges, the side edges include portions that converge toward the rear edge and are oriented at oblique angles relative to the rear edge,
- ii) in side elevation view presents a side surface that is substantially free of cores and having a generally vertical front edge, an opposed, generally vertical rear edge, a generally horizontal top edge, and a generally horizontal bottom edge, wherein no portion of the block body is visible above the top edge or below the bottom edge, and that
- iii) has a decorative front surface; and

b) a flange formed on the block body below the bottom edge of the side surface and in front of the rear edge of the side surface, that has a forward-facing locking surface.

<sup>22</sup>  
~~51~~. (New) The block of claim <sup>21</sup>~~50~~ wherein there are no connector pin openings or other openings in the top surface, and the side surface has no recesses, connector pin openings or other openings.

<sup>23</sup>  
~~52~~. (New) The block of claim <sup>21</sup>~~50~~ wherein the first and second side edges include notches.

<sup>24</sup>  
~~53~~. (New) The block of claim <sup>21</sup>~~50~~ wherein no portion of the block body is visible beyond said front, rear and side edges.

<sup>25</sup>  
~~54~~. (New) The block of claim <sup>21</sup>~~50~~, wherein the front surface is generally vertical.

<sup>26</sup>  
~~55~~. (New) The block of claim <sup>25</sup>~~54~~, wherein the front surface is generally planar.

<sup>27</sup>  
~~56~~. (New) The block of claim <sup>25</sup>~~54~~, wherein the front surface is non-planar.

<sup>28</sup>  
~~57~~ (New) The block of claim <sup>27</sup>~~56~~, wherein the front surface is faceted.

<sup>29</sup>  
~~58~~ (New) The block of claim <sup>28</sup>~~57~~, wherein the front surface comprises three facets.

<sup>30</sup>  
~~59~~ (New) The block of claim <sup>21</sup>~~50~~, wherein a line drawn on the top surface through the points where the converging side edge portions begin is substantially parallel to a line drawn through the points where the side edges join the rear edge of said top surface.

<sup>31</sup>  
~~60~~ (New) The block of claim <sup>21</sup>~~50~~, wherein said forward-facing locking surface is generally parallel to said vertical rear edge of said side surface.

<sup>32</sup>  
~~61~~ (New) The block of claim <sup>21</sup>~~50~~, wherein each side edge of said top surface includes a forwardly converging portion that intersects the front edge of said top surface at an angle of less than 90 degrees.

<sup>33</sup>  
~~62~~ (New) The block of claim <sup>22</sup>~~51~~, wherein the converging side edge portions each intersect the rear edge of said top surface at an angle of less than 90 degrees.

<sup>34</sup>  
~~63~~ (New) A retaining wall comprising a plurality of courses of masonry blocks, each course comprising a plurality of masonry blocks, and the blocks of each said course after the first course of blocks being positioned on the blocks of a next lower course in succession, and each said masonry block comprising:

- (a) a generally horizontal upper surface;
- (b) a lower surface;
- (c) a front face that is generally vertical over a substantial portion of the front face and which is substantially perpendicular to the upper surface at the intersection of the front face and the upper surface;
- (d) a rear face;
- (e) a pair of generally vertical side faces joining the front and rear faces;

(f) a flange extending below the lower surface of the block to provide a surface suitable for engaging the block with the rear face of an adjacent block in the next lower course to thereby provide a set-back of the course above with respect to the next lower course; and

(g) wherein the block is wider at the front face than it is at the rear face;

and wherein the wall further comprises a distortable supporting matrix having a portion thereof positioned between the upper surfaces of blocks in the next lower course and the lower surfaces of adjacent blocks in the course above, and having a portion thereof positioned in soil behind the retaining wall, whereby the matrix is distorted by the flanges of blocks in the course above.

<sup>35</sup>  
~~64~~ (New) The retaining wall of claim <sup>34</sup>~~63~~, wherein at least some of the blocks include one or more cores extending vertically through the blocks generally parallel to said side faces.

<sup>36</sup>  
~~65~~ (New) The retaining wall of claim <sup>34</sup>~~63~~ wherein at least some of the masonry blocks are free from cores extending through the blocks from side face to side face.

<sup>37</sup>  
~~66~~ (New) The retaining wall of claim <sup>35</sup>~~64~~ wherein the cores extend partially through the blocks from the lower surfaces towards the upper surfaces.

<sup>38</sup>  
~~67~~ (New) The retaining wall of claim <sup>34</sup>~~63~~ wherein the distortable supporting matrix is in the form of a grid.

<sup>39</sup>  
~~68~~ (New) The retaining wall of claim <sup>34</sup>~~63~~ wherein the side faces each include a first portion that extends rearwardly from the front face and a second portion that extends rearwardly from the first portion, and wherein the first portions do not converge as they extend rearwardly, and wherein the second portions do converge as they extend rearwardly.

<sup>40</sup>  
~~69~~ (New) The retaining wall of claim <sup>36</sup>~~65~~ wherein said side faces have notches that extend from said upper surface to said lower surface.



Sub D4  
41  
70. (New) A pre-split concrete unit adapted to be split in a splitting machine to yield at least two concrete blocks, said pre-split concrete unit comprising:

a body comprising a pair of integral face-to-face concrete blocks, the body having a top surface, a bottom surface opposed to said top surface, opposed first and second end surfaces joining said top and bottom surfaces and being generally perpendicular to them, and opposed sides joining said top and bottom surfaces and joining said first and second end surfaces, said opposed sides being generally perpendicular to said top and bottom surfaces and said first and second end surfaces;

said sides comprise portions that converge as they approach said first and second end surfaces; and

two flanges integrally formed on said body and extending above said top surface, one said flange formed adjacent the first end surface and the other flange formed adjacent the second end surface.

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42  
71. (New) The pre-split concrete unit of claim 70, wherein each said flange includes a rear surface that is substantially an extension of the respective said end surface.

Sub D5  
43  
72. (New) The pre-split concrete unit of claim 70, wherein each said flange includes a front locking surface that intersects the top surface, and the line where the front locking surface intersects the top surface is generally parallel to the respective said end surface.

44  
73. (New) The pre-split concrete unit of claim 70, wherein said sides each further include a portion that interconnects said converging portions and that extends generally perpendicular to said end surfaces.

Sub D6  
45  
74. (New) The pre-split concrete unit of claim 73, wherein said body is symmetrical on each side of an axis that bisects said body and that extends between said sides parallel to said end surfaces.

<sup>46 45</sup>  
75. (New) The pre-split concrete unit of claim <sup>44</sup>74, wherein said blocks are substantially the same size.

<sup>44 46</sup>  
76. (New) The pre-split concrete unit of claim <sup>44</sup>74, wherein the axis bisects said perpendicular portions of said sides.

<sup>48</sup>  
77. (New) The pre-split concrete unit of claim <sup>43</sup>73, wherein each said side includes a pair of converging portions that converge towards the other side as the converging portions extend toward said end surfaces.

<sup>49</sup>  
78. (New) The pre-split concrete unit of claim <sup>43</sup>73, wherein said perpendicular portions of said sides include notches that extend from said top surface to said bottom surface, and that are intersected by the axis.

<sup>50 49</sup>  
79. (New) The pre-split concrete unit of claim <sup>48</sup>78, wherein said sides further include notches at the junctures between said perpendicular side portions and said converging side portions.

<sup>51 50</sup>  
80. (New) The pre-split concrete unit of claim <sup>40 41</sup>70, wherein said top surface forms a portion of a bottom surface of a block and said bottom surface forms a portion of a top surface of the same block that results from splitting the pre-split unit.

<sup>52 51</sup>  
81. (New) The pre-split concrete unit of claim <sup>40 41</sup>70, wherein said top surface is substantially parallel to said bottom surface.

<sup>53</sup>  
82. (New) A concrete block formed from the pre-split concrete unit according to claim <sup>43</sup>73, comprising:  
opposed and generally parallel top and bottom surfaces;  
a rear face extending between the top and bottom surfaces and generally perpendicular thereto;

Sub D  
a generally vertical and generally planar front face extending between the top and bottom surfaces;

a pair of side faces joining the front and rear faces and joining the top and bottom surfaces, the side faces being generally perpendicular to the top and bottom surfaces and to the rear face, and the side faces having rearwardly converging portions and portions that extend between the front face and the rearwardly converging portions that are generally perpendicular to the rear face; and

a flange extending below the bottom surface.

54  
83. (New) A concrete block formed from the pre-split concrete unit according to claim 35, comprising:

opposed and generally parallel top and bottom surfaces;

a rear face extending between the top and bottom surfaces and generally perpendicular thereto;

a generally vertical front face extending between the top and bottom surfaces, the front face comprising three facets;

a pair of side faces joining the front and rear faces and joining the top and bottom surfaces, the side faces being generally perpendicular to the top and bottom surfaces and to the rear face, and the side faces having rearwardly converging portions that extend between the front face and the rear face; and

a flange extending below the bottom surface.

### Remarks

Reconsideration is requested in view of the above amendments and the following remarks. Claims 17-22 have been canceled without prejudice or disclaimer. New claims 30-83 are added. The new claims are supported by the original disclosure and no new matter has been added. Claims 30-83 are pending.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4). Applicants propose amending the figures as shown in red on the Proposed Drawing Correction filed herewith. In Figures 8 and 9, the reference character denoting the supporting matrix has been changed to numeral 43. Corresponding changes have been made to the description of the supporting matrix. Formal drawings incorporating the proposed changes will be submitted at a later date pending approval of the changes by the Examiner. Withdrawal of the objection is requested.

The abstract is objected to for being more than a single paragraph. Enclosed herewith on a separate sheet is a replacement abstract that is a single paragraph. Withdrawal of the objection is requested.

The specification has also been amended to update the status of the applications from which priority is claimed.

Claim 18 is rejected under 35 USC 112, second paragraph as being indefinite. Claim 18 has been cancelled. Withdrawal of the rejection is requested.

Claims 17-22 have been rejected over US 5,294,216 for obviousness-type double patenting. Claims 17-22 have been canceled. This rejection has been avoided by the filing of the Terminal Disclaimer in the present case. Applicants are filing this terminal disclaimer in order to preempt any obviousness-type double patenting rejection applied to the new claims and thereby expedite allowance of this application. Applicants note that any patent issuing from the present case is set to expire prior to the date of expiration of US 5,294,216. Therefore, there is no term to disclaim that would extend beyond the expiration of US 5,294,216.

Further, claims 17-22 have been rejected over US 6,142,713 for obviousness-type double patenting. Claims 17-22 have been canceled. A Terminal Disclaimer is filed herewith which causes the present claims to expire simultaneously with the claims of US 6,142,713. Applicants



are filing this terminal disclaimer in order to preempt any obviousness-type double patenting rejection applied to the new claims and thereby expedite allowance of this application.

Still further, claims 17-22 have been rejected over US 5,827,015 for obviousness-type double patenting. Claims 17-22 have been canceled. A Terminal Disclaimer is filed herewith which causes the present claims to expire simultaneously with the claims of US 5,827,015.

Applicants are filing this terminal disclaimer in order to preempt any obviousness-type double patenting rejection applied to the new claims and thereby expedite allowance of this application.

Still further, claims 17-22 have been rejected over US 6,312,197 for obviousness-type double patenting. Claims 17-22 have been canceled. A Terminal Disclaimer is filed herewith which causes the present claims to expire simultaneously with the claims of US 6,312,197.

Applicants are filing this terminal disclaimer in order to preempt any obviousness-type double patenting rejection applied to the new claims and thereby expedite allowance of this application.

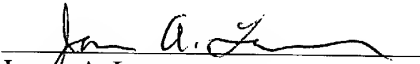
#### In Conclusion

With this response Applicants believe that the claims now pending in this patent application are in immediate condition for allowance. Favorable consideration is respectfully requested. If any further questions arise, the Examiner is invited to contact Applicants' representative at the number listed below.

Respectfully submitted,

MERCHANT & GOULD P.C.  
P.O. Box 2903  
Minneapolis, Minnesota 55402  
(612) 332-5300

Date: July 11, 2002

  
James A. Larson  
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S/N 09/954,616

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	WOOLFORD ET AL.	Examiner:	F. LAGMAN
Serial No.:	09/954,616	Group Art Unit:	3673
Filed:	SEPTEMBER 17, 2001	Docket No.:	3616.20USC6
Title:	COMPOSITE MASONRY BLOCK		

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**Marked-up Copy Showing Changes Made**

**In the Specification**

The paragraph beginning at page 1, line 1 has been replaced with the following rewritten paragraph:

-- This application is a Continuation of application Serial No. 09/665,231, filed September 18, 2000, now issued as U.S. Patent 6,312,197, which is a Continuation of application Serial No. 09/497,250, filed February 3, 2000, now issued as U.S. Patent No. 6,183,168, which is a Continuation of application Serial No. 09/160,916, filed September 25, 1998, now issued as U.S. Patent No. 6,142,713, which is a Continuation of application Serial No. 08/921,481, filed September 2, 1997, now issued as U.S. Patent No. 5,827,015, which is a Continuation of application Serial No. 08/675,572, filed July 3, 1996 (now abandoned), which is a Continuation of application Serial No. 08/469,795, filed June 6, 1995, now issued as U.S. Patent No. 5,589,124, which is a Continuation of application Serial No. 08/157,830, filed November 24, 1993 (now abandoned), which is a Divisional of application Serial No. 07/651,322, filed February 6, 1991, now issued as U.S. Patent No. 5,294,216, which is a Divisional of application Serial No. 07/534,831, filed June 7, 1990, now issued as U.S. Patent No. 5,062,610, which is a Continuation-in-Part application of Serial No. 07/413,400, filed September 27, 1989 (now abandoned), which is a Continuation-in-Part application of Serial No. 07/413,050, filed September 27, 1989 (now abandoned), which applications are incorporated herein by reference.

The paragraph beginning at page 13, line 22 has been replaced with the following rewritten paragraph:

Ⓟ

-- As can be seen in Fig. 8, a supporting matrix [42] 43 may be used to anchor the blocks in the earth fill 48' behind the wall. One advantage of the block of the present invention is that despite the absence of pins, the distortion created by the block flange 40 anchors the entire width of the matrix [42] 43 when pressed between two adjacent blocks of different courses, as can be seen in Fig. 9.--

The paragraph beginning at page 13, line 29 has been replaced with the following rewritten paragraph:

-- In this instance, a wall is constructed again by forming a trench in the earth. The first course 49 of the wall is seated in the trench and will be under the soil once the wall is backfilled. The blocks 15 are placed on a securing mat or matrix [42] 43 which is secured within the bank 48' by deadheads 44. The deadheads 44 serve as an additional stabilizing factor for the wall providing additional strength. The deadheads 44 may be staggered at given intervals over the length of each course and from course to course to provide an overall stability to the entire wall structure.--

The abstract has been amended as follows.

The present invention includes block molds and manufacturing processes as well as a composite masonry block comprising a block body having an irregular trapezoidal shape and comprising a front surface and a back surface, an upper surface and a lower surface, and first and second sidewalls. Both the first and second sidewalls have a first and second part, the sidewall first part extends from the block front surface towards the block back surface at an angle of no greater than ninety degrees in relationship to the block front surface, the sidewall second part surfaces adjoins and lies between the sidewall first parts and the block back surface. The block also has a flange extending from the block back surface past the height of the block. Also disclosed are landscaping structures such as a retaining wall comprising a plurality of the composite masonry blocks of the present invention.

[Also disclosed are landscaping structures such as a retaining wall comprising a plurality of the composite masonry blocks of the present invention.]

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